IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION

LASERDYNAMICS	*	Civil Docket No.
	*	2:06-CV-348
VS.	*	Marshall, Texas
	*	
	*	July 2, 2009
QUANTA, ET AL	*	8:15 A.M.

TRANSCRIPT OF TRIAL PROCEEDINGS
BEFORE THE HONORABLE T. JOHN WARD
UNITED STATES DISTRICT JUDGE
AND A JURY

APPEARANCES:

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(Proceedings recorded by mechanical stenography, transcript produced on CAT system.)

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P R O C E E D I N G S

(Jury out.)

COURT SECURITY OFFICER: All rise.

THE COURT: Please be seated.

All right. We have a number of matters I understand you want to bring up this morning.

What's the Plaintiff got?

MR. RAMBIN: Yes, Your Honor.

The first thing we have is some objections to the demonstratives. Specifically, there are some demonstratives that they try to insert, a 2001 hypothetical date, into the case. The date is 2006.

Secondly, there are also some demonstratives in Mr. Reed's report, or in conjunction with the testimony, they get into breaking down the litigation licenses. That wasn't in his report for obvious reasons. Those didn't come into the case until yesterday. But, nonetheless, those are outside of his report.

And finally, they also -- there is a demonstrative that was a tab from Mr. Reed's report that lays out all the entities and all the licenses. And given the Court's order, we don't see the relevance of that.

In addition, there is a motion to strike the testimony and deal with the issue of this buy/sell situation.

Yesterday, we had a hearing downstairs in front of Judge Everingham, and -- over some demonstratives that introduced the buy/sell arrangement. And the representation from the Quanta Defendants was that they were going to say that this is something that happens in general and that was as far as they were

going to go.

And based on that, Judge Everingham entered an order allowing them to show that demonstrative. But then yesterday at trial, what they did is they went beyond that order. They've not only said it happens in general, but they said it happens the vast majority of times.

And that was our specific objection at the hearing in front of Judge Everingham, because they didn't produce documents to demonstrate that nor did they give us deposition testimony on -- going to the issue of whether the buy/sell issue applies to the drives accused in this case.

THE COURT: Well now, like Judge Everingham, it's my understanding that there was deposition testimony about the buy/sell, and my understanding is that he said that it was represented to him that it was going to be done in general.

What do you say about that, Mr. Parker?

MS. MURRAY: Your Honor, when they were objecting to that exhibit, when I explained to Judge Everingham --

THE COURT: I know what Judge Everingham said. I just talked to him.

MS. MURRAY: Okay. Yes, that -- that

demonstrative was to show one way that Quanta does business.

THE COURT: Well, that's right. It was to show one way, but then the testimony that you elicited was that that was the predominant way. So those are two inconsistent positions.

I'll instruct the jury that the previous position of the Defendant, prior to yesterday, had been that that was only one of the ways, and they are to take that into account in evaluating the credibility of this witness, who is coming in here now testifying that it is the predominant way. It's a change in position. I'll give them that instruction.

I'll overrule the motion to strike.

So now then, let's take up these other issues.

How do you say that the 2006 is the only possible date of the first negotiations?

You've elicited testimony through your own witnesses from the Plaintiff that a letter, either in 2001 or 2002, was made threatening -- wanting to offer this -- this -- a license on this -- was offering a license under reasonable terms, I believe is what the testimony is.

MR. RAMBIN: Yes, Your Honor.

The letter was to QSI in 2002. There was no such discussion with QCI.

And further, this is something that was taken up in front of Judge Everingham. The hypothetical date was basically set by court order, because there was an interrogatory outstanding to the Quanta Defendants to identify for us what they contended the hypothetical date was.

And they did not answer that interrogatory, until after expert reports had been done, and, accordingly, Judge Everingham ruled that they could not contest the 2006 hypothetical date.

THE COURT: What --

MR. RAMBIN: And in their case-in-chief and in rebuttal, they can come back in.

MR. PARKER: I believe that's not an appropriate characterization of Judge Everingham's order. I believe what the order was, was that we could not use the facts set forth in that interrogatory to support our position on the hypothetical negotiation date.

But there were plenty of facts already in the record, and there is a stipulated fact in this case right now that we originally sold into this country in '01 -- in '01 and '02 and also that this --

THE COURT: We or what --

MR. PARKER: QSI.

THE COURT: QSI. Now then, you're contending that QCI is the one that sells. That's the problem, Mr. Parker. You're changing your position on me.

MR. PARKER: I think that their evidence in their damage evidence includes both QSI and QCI selling into this country.

THE COURT: Does anybody happen to have a copy of the Judge's rulings so I can see what we've got?

The motion and the ruling?

Was it a motion in limine, or what was it?

MR. SANKEY: Judge, if I could add to that, I believe, based on the Court's summary judgment ruling that came out Monday, the 52 million, Judge, that Mr. Davis testified yesterday, are drives that are in QCI computers coming into the United States directly or indirectly, not anything being shipped directly by QSI.

Those are out of the case, based on the summary judgment order.

THE COURT: Well, your damage model was limited to QCI yesterday.

MR. SANKEY: Correct. And they were not

notified of anything of infringement or licensing until August of 2006 when the lawsuit was filed.

THE COURT: Well, it's been the Defendants' position consistently, Mr. Parker, throughout today -- or not today -- this week in front of this trial that QSI and QCI are totally separate entities.

MR. PARKER: It is our position and has been our position as it has between their --

THE COURT: Then the infringement as to QSI has nothing to do with the damage model as to QCI, sir.

MR. PARKER: But it's been their position and they're going to argue to the jury, I suspect, that we're one and the same, and, in fact, they put up board charts and --

THE COURT: Well, their only damage testimony is to QCI.

MR. PARKER: Yes, sir.

THE COURT: Well, how am I going to submit a question on damages to anybody other than QCI, then, since that's all the testimony I've heard?

MR. PARKER: I don't know that you can.

THE COURT: I don't think I can either.

MR. PARKER: Yes, sir.

THE COURT: It looks like to me 2006 is the date. There's no testimony about QSI -- about QCI prior to 2006, is there?

MR. PARKER: Not that I am aware of.

THE COURT: Okay. I mean, your position has been consistently, QSI and QCI are totally separate, then this letter that happened in 2001 or 2002, addressed to QSI, can't be to establish -- you can't have it both ways.

You can't say to me on the one hand, they're totally separate, and then try to use a demand letter to QSI to say that that establishes the date of infringement, the date of the hypothetical negotiation to QCI.

You're telling me they are totally separate.

MR. PARKER: Yes, sir. And they're taking just the opposite position, that we're one and the same.

THE COURT: Well, there are not going to be any -- he cross-examined the witnesses about that, but it's going to be the damage question -- or the damage testimony was presented solely to QCI, so I cannot possibly -- I don't see how I can submit it on anybody else, or the infringement question on anyone

else.

MR. PARKER: And, of course, the damage model is limited to QCI computers with QSI drives, so...

THE COURT: It's still limited to QCI and it's limited to 2006 and forward, the testimony has been.

MR. PARKER: The damage period, yes, sir.

THE COURT: Okay. Well then, that's the hypothetical negotiation. I'm going to grant the motion on that.

MR. PARKER: Yes, sir.

THE COURT: I mean, we're going to cut it back.

Now, here's where the position that you put me in on whether or not they're going to get into all these license agreements. You wait until the very end of their testimony, which they are not prepared to go forward with, obviously, based on the Court's ruling, that these litigation settlements can't come out and create a false impression in front of the jury.

And now then, you're trying to capitalize on that by changing your damage model and then inserting now new information that the Plaintiff did not have a chance to put into theirs.

MR. PARKER: I don't -- I would not

characterize it as an effort on our part to capitalize on it. I would just characterize it as effort on our part to respond to the fact that it is now in the case. It actually increases our expert's damage calculation, but we think he ought to be able to address it since they addressed it.

THE COURT: They didn't get to fully address it, sir.

MR. PARKER: No, I understand that, Your Honor.

THE COURT: They only addressed it to the extent they had to to try to create at least something of a truthful explanation of what the true picture of this case was in terms of the total royalties received. And you took it as far as you would need to take it. I'm not going to allow your expert to mention it.

That's sustained.

MR. PARKER: Yes, sir.

THE COURT: Now then, the third thing is about this use of the S-curve technique here. What are we talking about here?

MR. RAMBIN: Your Honor, if I may, there's one other thing on the license issue.

It's not going to the litigation issue, but there is a demonstrative that's a tab from Reed's

report, and it lays out all the prior licensed entities, and it just talks about who had a license and who didn't and when they got their licenses.

And I believe this goes back to the colloquy we had at the bench yesterday at the close of the day. I'm guessing they're going there. I don't speak for them, but I don't see the relevance for that at this point, given the Court's order and given the Court's summary judgment -- summary judgment order and given the conversation we had yesterday at the bench.

THE COURT: What -- what are you speaking about now specifically, Mr. Rambin?

MR. RAMBIN: I'm speaking about the list of -- it's Tab B6.

THE COURT: Okay. I've got it here. Now what is it that you say is new here that wasn't before?

MR. RAMBIN: There's nothing there that's new. We're saying that it's irrelevant in light of the Court's order clarifying -- there's nothing -- there's no question anymore about the license issue, so the license issues aren't really in the case.

So I don't see the relevance for this to go through line-by-line who got a license and when, given what I anticipate is going to be happening at some -- they're going to followup and try to open the

door they tried to open yesterday.

MR. SANKEY: If I could add to that, Your Honor.

At the time he did that exhibit in his report, those drives were in the case, and they were going to say, well, we've got a license from LVS, and we buy drives from LVS; therefore, it's a licensed drive.

The only drives in the case now were manufactured by QSI, so those are no longer relevant to any issue.

THE COURT: How are they relevant, Mr. Parker?

MR. PARKER: Well, they are relevant, Your Honor, because it shows what other participants in the industry, what kind of arrangements they have with respect to royalties, and supports his expert opinion.

MR. RAMBIN: Your Honor, the concern we have is that one of the subjects that Mr. Reed discussed in his report, and we anticipate they'll offer testimony on, is the non-infringing alternatives available to QCI. And to the extent that he tries to get into who was licensed and when and whether that was a non-infringing alternative or not, I believe that was already covered yesterday afternoon.

THE COURT: No. What was covered

yesterday afternoon was the witness beginning to offer what-if testimony, basically opinion testimony, about what if we would have known whatever we had known. This is totally different. This involves a license between parties unrelated to this lawsuit, does it not?

MR. PARKER: In some cases, it does, Your Honor, but it supports his testimony as to what --

THE COURT: Well, in what cases it doesn't, then, on this list under Tab 6?

MR. PARKER: It may be all of them, Your Honor. But what it does is support his opinion as to what willing participants in the marketplace were willing to do with respect to licensing and the standards of licensing and cost at that point in time, and it --

THE COURT: That point in time being 2006?

MR. PARKER: That point in time being the time period of this lawsuit, yes, sir, or the time of those licenses -- those licenses are relevant to, we believe, the support of his opinion.

THE COURT: I'm going to allow to use 2000 -- use it for that purpose only.

MR. PARKER: Yes, sir.

THE COURT: Does that take care of it or

not?

Now, we've still need to talk about this S-curve technique. I guess you've got -- what's the objection exactly here?

I'm talking about this right here (indicating).

MS. SANGALLI: Those are demonstratives that the Defendants provided us last night. There are two signals that are shown on that page there; one is the S-curve signal, which is the only theory that they have been presenting with respect to non-infringement.

The other signal, the one that looks just like a couple of humps is an SBAD signal.

Their expert has never discussed the SBAD signal in their expert report. In fact, during his deposition, when he was asked whether he knew what an SBAD signal was and what the difference between SBAD and S-curve was, he said that he did not know and did not know what an SBAD signal is.

And now it's showing up in their demonstratives, so, obviously, they're planning on having their expert testify about something that has not appeared before in his report.

THE COURT: Was it in the expert's report or not?

MR. PLATT: Yes, Your Honor.

He points out in Page 17 through 186 his report that Dr. Howe talks about the elapsed time that occurs between these peaks and the resulting SBAD signal that correspond to the transparent substrate surface of the disk and the disk data surface, comparing the last time with the threshold comparison value.

Then he goes on to say these rely on S-curve measurements and is well-known and so describes in the above citation from Howe. The S-curve measurements originate from focusing effort effects through the disk surveys.

Now, during his deposition, I just learned --

THE COURT: That's all about S-curves. That's over on the -- my far left, right?

MR. PLATT: Right. He does talk about the fact that what they're looking at -- and this is what Dr. Howe points out and Dr. Howe talks about measuring the elapsed time that occurs between those peaks and the resulting SBAD signal.

And then he goes on to say these rely on S-curve measurements, because there are sort of two sides on the same point.

THE COURT: Well, that half on the left,

you are permitted to take it off, then, on the right.

MS. SANGALLI: Thank you, Your Honor.

THE COURT: All right. What else?

MS. SANGALLI: There is also -- we have a datasheet that we've submitted as an exhibit, or what we would actually like to use as a demonstrative. It's a datasheet that had been -- that our expert had relied on in his expert report.

He attached the datasheet in support of what he was saying in his expert report. The datasheet that was attached was the wrong version. We have asked if he could put the correct version into -- use the correct version as part of his testimony.

THE COURT: I'm not clear. You want to substitute an exhibit?

MS. SANGALLI: That's correct, Your Honor.

THE COURT: Any objection to that?

MR. PLATT: Yes, Your Honor.

This -- the cites of this document relating to a chipset called CXA1372, they originally tried to put it in a datasheet for a model called 1372BQ/BS that's undated. It hasn't been authenticated. Judge Everingham looked at this, and he ruled that it was an undated datasheet; that without further evidence,

the significance of the B designation on that, if any, the report just doesn't define -- the Exhibit 130 references the same model number as the '540 patent.

The new datasheet they're proposing has the same problems as the datasheet that Judge Everingham didn't allow previously.

MR. SANKEY: Judge, if I could.

In his expert report, he cites the correct datasheet, the 1372. He inadvertently attached a different one, and when we sent it in to date it, they pointed out that it had this BQ at the end of the number.

We now have a copy of the 1372 that he referred to in his report, and we can also -- the witness can date it, and we have a textbook that dates it also.

THE COURT: Is he going to be available for rebuttal?

MR. SANKEY: Yes.

THE COURT: Well --

MR. PLATT: Your Honor --

THE COURT: I will allow you to reopen your case-in-chief during the rebuttal just for that limited purpose. If he can lay a proper foundation, I will give him the opportunity.

MR. SANKEY: Thank you.

MS. SANGALLI: Thank you, Your Honor.

THE COURT: Anything else?

MR. SANKEY: Nothing further.

THE COURT: Bring them in.

(Jury in.)

THE COURT: Everyone please be seated.

Thank you, Ladies and Gentlemen. Thank you for being here on time.

Counsel and I have already had some discussions this morning about legal matters. I needed to -- when we originally picked this jury, I had a matter scheduled for the morning of July -- next Monday morning.

That matter is now resolved; however, I, know that when you were selected as jurors, I told you for planning purposes that we wouldn't be in trial on Monday, July the 6th.

And my inquiry now is, since that time is now available, I would like to go ahead and reconvene on Monday morning, the 6th, rather than -- but if someone has made plans, relying on what I told you is going to happen, I need to know about it.

Is there anybody that's made plans that would be difficult to change and could not be here on

Monday, the 6th?

Everyone can then?

Okay. I am hopeful that these lawyers are going to actually finish the evidence today, and that way you will be -- what you would be hearing on Monday, first thing early, was opening arguments and my charge, and you would be deliberating on the case perhaps be through on Monday or possibly come back Tuesday.

But I'm not representing to you that -- based upon just the hearings we've already had this morning that we're going to be moving quite as quickly as I had hoped, but we'll see how hard I can press on the accelerator as the day goes on with these lawyers. I have a heavy foot some days. Mine's getting heavier in this case. So we'll see if I can move them along as fast as I can.

All right. Who will be the next witness?

MS. MURRAY: Your Honor, we have a few more questions of Tracy Li.

THE COURT: All right. Come around, Ms. Li.

Proceed.

TRACY LI, DEFENDANTS' WITNESS, PREVIOUSLY SWORN

DIRECT EXAMINATION (CONTINUED)

BY MS. MURRAY:

Q. Good morning, Ms. Li.

Do you recall when Plaintiff filed this lawsuit against Quanta Computer?

A. Yes.

Q. And when was that?

A. Quanta Computer, September 2007.

Q. And after Quanta Computer was sued, has Quanta Computer examined whether the drives that it purchases from third parties work in the same way as the '981 patent?

A. We are not able to do it, because at Quanta, we are assembly company, and we don't make the drive, that kind of component. So, you know, we are not able to understand the technology of the drive itself. Don't have the abilities to do it.

Q. Okay. I would like to talk a little bit about a document that Mr. Sankey had shown you on Tuesday.

MS. MURRAY: If we can bring up Exhibit 219, please.

Q. (By Ms. Murray) Do you recall Mr. Sankey showing you this agreement between Quanta Computer and Hewlett-Packard?

A. Yes, I remember.

Q. Were you involved in negotiating this

agreement, Ms. Li?

A. Yes.

[redacted]

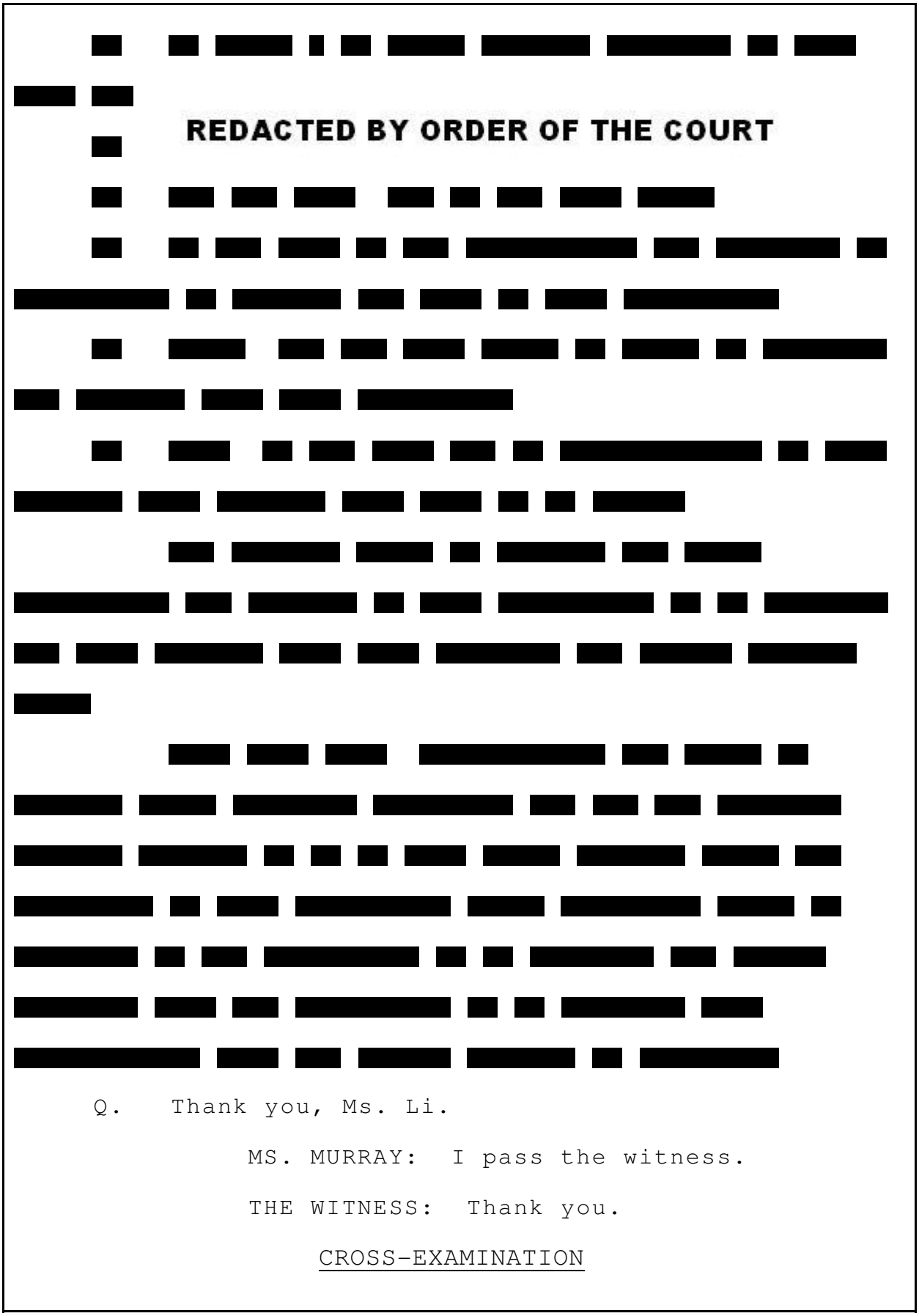
REDACTED BY ORDER OF THE COURT

[redacted]

Q. Okay. So let's take a look.

MS. MURRAY: If we can go to Page 6, please, of this agreement.

[redacted]



Q. Thank you, Ms. Li.

MS. MURRAY: I pass the witness.

THE WITNESS: Thank you.

CROSS-EXAMINATION

BY MR. SANKEY:

Q. Good morning, Ms. Li.

A. Good morning.

Q. As I understand your testimony this morning, your company does not know how the optical disk drives operate, correct?

A. Correct.

Q. And so you can't tell the jury one way or the other whether or not your company is infringing, can you?

A. We don't know the technology; that's correct.

Q. Now, you sent a letter over to QSI demanding that they indemnify for you any damages that this jury may find, and you also asked them to assure you that you're not infringing, correct?

A. Correct. We sent an indemnification to QSI.

Q. And you sent that in January of 2008?

A. Yes, I believe so.

Q. And your testimony Tuesday was no one has ever gotten back to you on those letters, correct?

A. Correct.

[redacted]

REDACTED BY ORDER OF THE COURT

[redacted]

REDACTED BY ORDER OF THE COURT

[redacted]

Q. You don't have a license from LaserDynamics that covers ODDs, do you?

A. No, we don't. That's why we are here, I think.

Q. Your testimony yesterday afternoon was that your company doesn't pay royalties on any components because you don't make the component, right?

A. Right.

Q. Do you understand that the patent laws are broader than just prohibiting you from making the product; they also prohibit you from selling or shipping the product into the United States?

Do you understand that?

A. I understand the patent law.

Q. Do you understand that a component that goes

in a computer can also infringe?

A. Can also -- yeah, your statement is correct.

Q. Now, you talked briefly about how QCI obtains different ways you obtain drives, and there were -- I think you buy them or you get them by consignment or you do a buy/sell agreement.

Regardless of how it's papered, the bottom line is the drive goes directly from QSI in China to the shop or the manufacturing shop to QCI where they put it in the computer, correct?

A. In some cases, yes. It's just, you know, it's shorter delivery time. I think that's the concern.

MR. SANKEY: Your Honor, is this an appropriate time for our instruction?

THE COURT: I'm working on that. You got a few more questions?

MR. SANKEY: No more questions, Your Honor.

THE COURT: Ladies and Gentlemen, yesterday afternoon testimony was elicited from this witness about this, quote, buy/sell arrangement, wherein the testimony was that Quanta Computer purchased the components from the customer as directed by the customer, then Quanta Computer then assembled the computer for the customer, and then Quanta Computer sold

the assembled computer back to the same customer.

Prior to yesterday, the position of Quanta Computers was that this buy/sell arrangement generally was one of the ways in which they accomplished their -- or the way they did their business.

Yesterday, the testimony was, for the first time, that that was the predominant method of doing business.

You are instructed that this constitutes a significant change in the testimony, and no documents have been produced that support that, and that you may take this instruction into account in judging the credibility of all of this witness' testimony and all other Quanta Computer's positions in this case.

MR. SANKEY: Thank you, Your Honor.

THE COURT: Who will be your next witness?

You may step down.

THE WITNESS: Thank you.

MS. MURRAY: William Wang, Your Honor, W-A-N-G.

COURTROOM DEPUTY: Raise your right hand, please.

(Witness sworn.)

WILLIAM WANG, DEFENDANTS' WITNESS, SWORN

DIRECT EXAMINATION

BY MS. MURRAY:

Q. Good morning.

A. Good morning.

Q. Can you please state your name?

A. William Wang.

Q. Mr. Wang, do you speak English?

A. I speak some English, but I feel more comfortable answering questions in Mandarin -- correction -- in Chinese.

Q. What company do you currently work for?

A. Quanta Storage, Inc.

Q. And what is your position at Quanta Storage, Inc.?

A. I'm the Chief of the Finance Department.

Q. Is that what we would call the Chief Financial Officer, or the CFO, here in the United States?

A. Yes.

Q. Can you please explain a little bit about your educational background?

A. I graduated from National Taiwan University. I got my accounting degree, and that was in 1992.

Q. And what did you do after college?

A. After college, I served in the military.

Q. What did you do after that?

A. And after that, I joined the Deloitte & Touche as an auditor.

Q. What did you do after that?

A. And after that, I joined D-Link Corporation as an assistant manager in the Accounting Department.

Q. What is D-Link Corporation?

A. It is a company that makes networking products, including switches and wireless cards, et cetera.

Q. And where did you go after D-Link Corporation?

A. Then I joined Quanta Storage, Inc.

Q. And when was that?

A. That was in 2001.

Q. Can you tell us a little bit about your past work experience?

A. In the past, my job involves accounting responsibility, finance, and then auditing.

Q. Okay. You say in the past.

What do you mean by that?

A. You asked me about my work experience. That's my work experience in the past till now.

Q. Okay. I see. Thank you.

As a Director of Finance at Quanta Storage, what are your job responsibilities?

A. My job responsibilities include managing the

personnel in the Finance and Accounting Department and finish the work in the two departments.

I also represent the company to manage the relationship with the shareholders and investors. I would also represent a company to have discussions and communicate with our supervisory authority which is Gre-Tai Securities Market regarding some business and compliance issues.

Q. Can you tell us a little bit about QSI? What does QSI do?

A. We are a company specialize in the assembly and manufacturing and service of slim drive.

What I meant to say was, we are a subcontract manufacturing company, an OEM-type company, specializing in slim optical disk drive.

Q. What is a slim drive?

A. A slim drive is a small -- a smaller disk drive that can be installed in a laptop computer.

Q. When was QSI established?

A. In 1999.

Q. And is QSI a public company?

A. It is. It is a public-traded company, and our stocks are traded in Taiwan's Gre-Tai Securities Market. It's a security market just like the New York Stock Exchange in the United States.

Q. When did QSI become a public company?
A. In 2002.
Q. Do you know who the shareholders are of QSI?
A. Most of the shares are owned by the investing public, and other shareholders also include Quanta Computer, Inc., and also Chunghwa Post Co., Inc., and also some mutual funds.
Q. How much stock does Quanta Computer, Inc., hold in QSI?
A. About 29 percent.
Q. And can you explain QSI's relationship with Quanta Computer?
A. I think we're two independent publicly traded companies.
Q. Who is Quanta Storage America?
A. It is a 100-percent-owned subsidiary of ours.
Q. What does Quanta Storage America do?
A. This company doesn't do much business. The purpose for us to set up this company is because the Taiwanese government would give the operation headquarters some incentives if we have such a company.
Q. Did the company sell any products?
A. Not at all.
Q. Can you tell us who QSI's competitors are?
A. Okay. Companies such as Panasonic or Toshiba,

Samsung Storage Technology, which is called TSST. It is a joint venture company between Toshiba and Samsung. And also a company like Hitachi LG Data Storage. The company HLGS, it is also a joint venture company between Hitachi and LG. And others would be Lite-On, and another one is TEAC.

These companies are also major manufacturing companies of the slim disk drive.

Q. Can I go on Amazon.com and buy a QSI brand drive?

A. No.

Q. Why not?

A. Because we only manufacture for our customers, and they sell their brand-name products. We do not have products of our own brand name.

Q. So over the past couple of years, which brand-name companies has QSI made drives for?

THE INTERPRETER: Interpreter was asked to repeat the rendition.

A. Sony Optiarc.

Q. (By Ms. Murray) Any others?

A. And also Philips.

Q. Can you explain a little bit about how that works when QSI is making drives for these companies?

A. Basically, customers would come to us and tell

us what their product spec -- specifications are and they would also let us know their demands and give us a projection of their quantity they would need.

And we would plan production based on their specifications and the quantity. And then -- then we would attach their label on the products. And then we would ship the products to the destinations specified by them.

Q. I think we have a graphic kind of to help us walk through this process.

MS. MURRAY: Can you bring that up?

Q. (By Ms. Murray) Okay. So Mr. -- I didn't want to interrupt. I'm sorry.

Mr. Wang, can you tell us, where does QSI fit in this picture here?

A. We would be at the bottom, in the middle, drive OEM, that's our position.

Q. Okay. Right here (indicates)?

A. Correct.

Q. Okay. So these other companies that are here, are those competitors of Quanta Storage, Inc.?

A. They are.

Q. All right. And who does QSI make drives for?

A. Sony Optiarc.

Q. And where is Sony Optiarc in this?

MS. MURRAY: You can go back one.

A. A little above the drive vendors; that's the location.

Q. (By Ms. Murray) So up here (indicates)?

A. Correct.

Q. Now, does QSI make drives for all those companies that are in that circle?

A. No.

Q. So which ones does it make drives for?

A. Sony Optiarc.

Q. All right. If you can take us through -- I know you started to talk about this -- the process by which QSI makes drives for Sony Optiarc.

A. Basically, Sony Optiarc would issue a purchase order to us and let us know the quantities that they need and also the destinations they want us to ship the products.

Q. Okay. And what happens after Optiarc issues a purchase order?

THE INTERPRETER: Okay. Interpreter needs clarification.

A. Then based on their delivery instructions, we would ship the products to the OEMs.

Q. (By Ms. Murray) Okay. And when you say OEMs, what are you referring to?

A. I'm referring to the companies in the circle above there where it says notebook OEMs.

Q. So these four companies (indicates)?

A. Well, these four companies are the four largest companies. Of course, there are smaller companies, such as CoPark (phonetic spelling), FIC, or Twinhead, et cetera.

Q. And would QSI ship products to those companies you just mentioned as well?

A. Yes.

Q. Okay. And after QSI ships products to these notebook OEMs, what happens next?

A. Then we would notify Sony Optiarc that the products have been delivered.

Q. And what happens after that?

A. Basically, you know, when the time comes, they would pay us for the products.

Q. And who is paying you for the products?

A. Sony Optiarc.

Q. And why doesn't QSI just make the drives and sell them itself to these notebook OEMs?

A. Because our specialty is in manufacturing issues, so it's better for us to concentrate on our specialty and conduct our business in the OEM model.

Q. Does QSI still make slim drives for Philips?

A. No.

Q. When did that stop?

A. Around 2007.

Q. Do you know why that stopped you?

A. Because Philips formed a JV, joint venture company with Lite-On. That's the company we see above there under drive vendors, is PLDS. So for the manufacturing business for PLDS, they would get it from Lite-On.

Q. Okay.

A. Oh, they would give the business to Lite-On.

Q. Okay. And what does QSI ship products to?

A. Basically, we would ship our products to the destinations designated by our customers based on our customers' instructions and requests.

For example, if Sony Optiarc asked us to ship the products to a certain address, then we would do so.

Q. Do you ever ship drives directly to Sony?

A. Yes, but not very often.

Q. Why not very often?

A. Because, basically, the slim-type optical disk drives are to be used in the notebook computers, who I meant to say they would be assembled into the notebook computers.

So the larger quantities -- the great portion

of the quantities would go to these notebook OEMs.

Q. Okay. Do you know what a hub is, Mr. Wang?

A. My understanding is that a hub is a warehouse. And normally, it's a warehouse managed by a professional storage company. And normally, the customers would ask the suppliers to supply some JIT, just in time, inventories.

And -- and normally, the customer would ask us to ship our products to these warehouses, and then we would do so. And they can come to pick up their products at any time they want.

Q. So QSI ships products to hubs?

A. Yes.

Q. And you mentioned in your response JIT or just in time. What did you mean by that?

A. I would explain this way: Because the customers do not want to carry the load of finished products in their inventory, so they would ask the suppliers to put the products in designated warehouses or -- or their own warehouses so that whenever they need to pick up the products, they are able to do that.

Q. And when QSI is shipping products to a hub, who's paying for these products?

A. Well, when the products are delivered to the hub, I think no payments have been made. Because when

the products are shipped to the hub, basically, the products are still -- still belong to the suppliers.

Q. So when the products are shipped to the hub and they're at the hub, who has title to those products?

A. In the case of our relationship with Sony Optiarc, the title would still be ours.

Q. And does the title ever pass to -- out of QSI's hands?

A. When the customer come to pick up the products or when we ship the products out of the hub, then the title would be transferred to Sony Optiarc.

Q. And you said when the product is being shipped to the hub, no payment is being made. So when does QSI get paid?

A. After our customers pick up the products from the hub. Of course, there's a payment term -- a period of time before they would pay.

Q. And so what if, let's say, HP comes and picks up drives at a hub? Do they have title to the drive when they pick up the drives?

A. I don't know.

Q. Why don't you know?

A. My knowledge is only limited to our relationship with Sony Optiarc, according to the agreement.

As for the title ownership in the later stages, that would depend on the agreements between Sony Optiarc and HP.

Q. And when these drives get shipped to the hub, is Sony Optiarc in physical possession of these drives?

A. No. But they have the right to pick up the products from the hub at any time, and nobody would stop them. Nobody would -- okay. Right.

Q. Mr. Wang, do you know what an average optical disk drive sells for these days?

A. Around $25 U.S. dollars.

Q. Has this always been the price for ODDs?

A. No.

Q. When did QSI start selling optical disk drives?

A. In 2001.

Q. And in 2001, did it start selling drives into the United States?

A. In 2001, I think small quantities.

Q. And at the time in 2001, do you know how much an ODD was selling for?

A. About $80 per unit.

Q. Okay. How about in 2004? Do you know what the price of an ODD was?

A. About $50 U.S. dollars.

Q. And in 2006, do you know what the average price was for an ODD?

A. Maybe around, U.S.D., $40.

Q. What is U.S.D.?

A. U.S. dollars. That's in Chinese.

Q. Okay. Thank you.

In 2008, what was QSI's net profit margin on a typical ODD?

[redacted] REDACTED BY ORDER OF THE COURT

Q. And how did you determine that amount?

A. You can find the information in our financial information.

Q. Okay. I'd like to take a look at a graphic of the accused devices in this case.

Mr. Wang, do you understand that this is a list of the drives that are being accused of infringement in this case?

A. Yes.

Q. Do you know if all of these 20 drives go into computers that are assembled by Quanta Computer, Inc.?

A. For most of them, I'm not sure, but I'm sure some of them are not assembled in the computer.

Q. Okay. Are there specific ones that you know are not assembled in the computer?

A. For example, the EBW242 (sic) and also this EBW -- oh, EDW085 and also EDW041, the lower left-hand corner.

Q. Okay.

A. And also the one on the side, EDW042.

Q. Got it.

A. These are external optical disk drives. They have no way to assemble these into notebook computers.

Q. What is an external optical disk drive?

A. Basically, it's an independent optical disk drive that can operate by itself, but maybe you just need a USB connection to connect the drive to either a notebook computer or a desktop computer.

Q. Okay.

MS. MURRAY: If we can bring up Exhibit 370, please.

Q. (By Ms. Murray) Mr. Wang, do you know what this document is?

A. This is a product specification.

Q. Is this a product specification for a particular model drive?

A. It is. It is for EDW085.

Q. Okay. And what does this product spec show?

A. As I mentioned earlier, we can see that it is an EDW085 external drive.

Q. Thank you, Mr. Wang.

MS. MURRAY: Pass the witness.

CROSS-EXAMINATION

BY MR. SANKEY:

Q. Good morning, Mr. Wang.

A. Good morning.

Q. Your company produced documents in this case, correct?

A. Yes.

Q. And, in fact, I think you were in charge of putting together a number of the spreadsheets?

A. Yes.

Q. Can our experts in this case rely upon those spreadsheets that your company produced as being accurate?

A. Yes.

Q. So with respect to what the sheets say on which drives are shipped to the United States and how many drives are shipped to the United States, they can rely on those documents as being accurate, correct?

A. Yes.

Q. Okay. Now, when we looked at this sheet by your counsel, it does show that, again, you do what your customers ask you to do or tell you to do. QSI ships optical disk drives directly to Quanta Computer,

correct?

A. Yes.

Q. And then you said, once that drive is put into a Quanta Computer notebook, they then ship it based on a designation by their customer, correct?

A. I didn't -- I didn't say that.

Q. You understand that Quanta Computer, once that drive is in it, then ships the products out, correct?

A. After they have finished the assembly, of course, they're going to ship the products out.

Q. Okay. And I'm not much of an artist, but where those products are going to then is the United States, correct?

A. Can I confirm? Did you say all of them would be shipped to the United States?

Q. No, sir. I'm saying, do you know that there are laptop computers with QSI's drives in them that Quanta Computer ships to the United States?

A. I'm not sure. I don't know.

Q. Okay. Well, as the Chief Financial Officer of your company, you're in charge of writing checks, correct?

A. No.

Q. Do you oversee that process?

A. I would say it is within my job responsibility

to oversee that function.

Q. Do you understand that your company has hubs or warehouses in the United States?

A. Yes.

Q. And your company writes checks to pay those leases for the warehouses where those products are stored, correct?

A. We normally would pay through electronic remittance.

Q. You testified that someone could not go on amazon.com and buy a QSI drive, correct?

A. Correct.

Q. But I can go to Dell in Austin, Texas, and buy a laptop with a QSI drive in it, can't I?

A. I don't know whose drive is installed in their particular computer.

Q. Do you know whether or not any QSI drives are in any Dell computers?

A. Yes.

Q. And do you know that your company has Mr. Chung in Austin, Texas, to help work on these laptop computers with the drives in them?

A. I think that's arranged based on our customer's request.

Q. Now, you said, when your company is making

products for Philips and Sony Optiarc, that they receive the product specifications from those companies, correct?

A. Correct.

Q. And, therefore, your company doesn't know how its products operate, correct?

THE INTERPRETER: Interpreter needs to clarify with the witness.

A. I don't think that's the case. I think we do know how it operates.

Q. (By Mr. Sankey) You said that you -- your company has an American subsidiary, QSA, that doesn't do much business, but you have it because it gives you some incentive. What's the incentive?

A. Basically, it's a tax incentive. The Taiwanese government encourage the companies to plan their future operation to be international and that the tax incentives would be given to the companies in that way.

Q. Does the company do -- conduct any business, or is it a virtual company?

A. It doesn't have any specific business. Basically, it doesn't have any business.

Q. Now, you have testified that you participated in doing the contract between QSI and Philips, correct?

A. Yes. I have a small part of involvement.

[redacted]

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[redacted]

MR. SANKEY: Nothing further.

MS. MURRAY: Nothing further, Your Honor.

THE COURT: You may step down.

Who will be your next witness?

MS. MURRAY: Call Kevin Cheng, Your Honor.

KEVIN CHENG, DEFENDANTS' WITNESS, SWORN

DIRECT EXAMINATION

BY MS. MURRAY:

Q. Good morning.

A. Good morning.

Q. Mr. Cheng, you've testified before. Can you just tell us again which company you work for?

A. Currently, I'm working in Quanta Storage, Inc.

Q. And what is your position with Quanta Storage, Inc.?

A. I am the manager of the company's legal department.

Q. Can you give us a little bit about your educational background, please.

A. I graduated from National Chong-Shin University from its legal department. I graduated from National Chong-Shin University, and I got my law degree.

Q. Okay. And what did you do after college?

A. After college, I served in the Air Force for about two years.

Q. And can you tell us a little bit about your past work experience?

A. After my military service, I joined a law firm and worked there for five years, and after the law firm, I joined a company, Lite-On, and I worked in its legal department for about three and a half years. And after Lite-On, I joined Quanta Storage.

Q. What is -- what does Lite-On do?

A. Lite-On is a company that manufactures electronic products, including computer monitors and

also some optical disk drives.

Q. And how long have you worked at QSI?

A. Up to now, I've been there for about six and a half years.

Q. And how long have you worked in the optical disk drive industry?

A. Almost ten years.

Q. As the manager of the legal department at QSI, what are some of your job responsibilities?

A. My job responsibilities, including legal advice and consultation and also drafting and verifying some legal contracts and also handles disputes, including -- also handles some legal disputes and, of course, including the licensing negotiation matters.

Q. And after you joined QSI, when was the first time that you had heard of LaserDynamics?

A. As soon as I joined, I sought -- as soon as I joined QSI, I heard about this matter regarding to LaserDynamics. It's a licensing issue.

Q. And what --

THE INTERPRETER: Oh, I'm sorry.

MS. MURRAY: I'm sorry.

MR. PARKER: Interpreter omitted something.

A. It was around the year 2002.

Q. (By Ms. Murray) And when you say you heard about a licensing issue, what are you referring to?

A. As soon as I joined Quanta Storage, I heard that.

MR. SANKEY: Your Honor, I'm going to object to the answer revealing hearsay.

THE COURT: Sustained.

MS. MURRAY: Your Honor --

THE COURT: Sustained. Maybe you can rephrase your question.

Q. (By Ms. Murray) Mr. Cheng, I'd like to show you a copy of an exhibit.

MS. MURRAY: If we can pull up Exhibit 41, please.

A. Yes, I see that.

Q. (By Ms. Murray) During your investigation, when you joined QSI about the LaserDynamics negotiations, did you come to learn about this document?

A. So are you asking me if I have seen such a document?

Q. Well, I'm asking you, when -- when you joined QSI and you mentioned that you had heard of LaserDynamics, were you aware of this document?

THE COURT: Counsel approach, please.

(Bench conference.)

THE COURT: You know, I just sustained an objection to a question about what he heard, and then you told him -- you turned right around and said what he heard to the jury. You repeated what I had sustained an objection to.

MS. MURRAY: Your Honor, I believe he had said that he had heard --

THE COURT: I sustained -- he objected, and I sustained the hearsay objection, and then you turn right around and told it again, ma'am. Do you not understand what you did?

MS. MURRAY: I didn't realize that's what I was doing, Your Honor.

THE COURT: Well, when I sustain an objection, that means that the jury disregards it. You turned right around and put it right in front of the jury again, contrary to my instructions.

You don't understand that?

MS. MURRAY: I'm sorry, Your Honor. I didn't --

THE COURT: Well, now, I'm serious. You don't understand what you did?

MS. MURRAY: Your Honor, what I wanted -- what he -- what I understood you were sustaining the objection to is what he had heard from speaking with

people at the company.

THE COURT: Then you said what you heard. You repeated --

MS. MURRAY: I asked him, did he hear about -- what I asked him was, did you hear about --

THE COURT: If you're going to argue with me --

MS. MURRAY: No, I don't want to argue with you, Your Honor.

MR. PARKER: Don't, don't, don't. Just ask him if he's seen the letter and if he had any discussions with people representing LaserDynamics.

MR. SANKEY: Judge, I was getting ready to ask for a bench conference. I want to object to this entire line, because I'll tell you where they're going with it.

It's not an issue in the case. There will not be a damage question as to QSI. They want this witness to say that he participated in the dispute with QSI in 2002 and 2003 and that they met and that they were offered a license for between a hundred and $200,000.

THE COURT: Well, that still goes to reasonableness of the license agreement in 2006. I'm going to allow it for that purpose. I'll overrule that

objection.

(Bench conference concluded.)

MS. MURRAY: If we can put that back up, please.

Q. (By Ms. Murray) Mr. Cheng, have you seen this letter before?

A. Yes, I have.

Q. And have you had any dealings with LaserDynamics relating to this -- the contents of this letter?

A. Yes. Subsequently, we had some exchange of opinions regarding technical issues, and we also briefly mentioned --

THE INTERPRETER: Interpreter correction.

A. And also the issue of licensing was briefly mentioned.

Q. (By Ms. Murray) Can you tell us what was discussed?

A. After the matter was handed over to me, the discussion with them was mainly -- was mainly regarding whether we have used their technology in the patent.

In the very end -- I think it was around sometime in 2003 -- the attorney, on behalf of LaserDynamics, proposed a -- some simple licensing conditions for us to consider.

Q. And can you elaborate on what those licensing conditions were?

A. The condition was mainly regarding the licensing fee. The attorney on behalf of LaserDynamics explained -- or said at that time that based on the Quanta Storage business -- based on Quanta Storage's business scale at that time, LaserDynamics -- Laser (sic) is willing -- or was willing to negotiate a licensing fee of between 100,000 U.S. dollars and 200,000 U.S. dollars.

Q. And did QSI evaluate this proposal?

A. Basically, in these discussions, we explained our position to them, that we could not use the technology in their patent.

As for the issue of licensing, their attorney did not make any further contact with us; therefore, we did not have the opportunity to engage in any in-depth negotiation with them.

Q. Did they provide any written response back -- I'm sorry.

Did QSI provide any written response back to LaserDynamics?

A. Yes. I do remember, you know, we had some e-mail exchanges with them, and we explained our position. From a technology perspective, our company

did not use the claims in the patents.

Q. Okay.

MS. MURRAY: If we can bring up Exhibit 434, please.

Q. (By Ms. Murray) Is this a copy of the e-mail that you're referring to?

A. Yes, this is the e-mail.

Q. Okay. After you had those discussions with LaserDynamics, did LaserDynamics ever contact you in the second half of 2003?

A. To my recollection, I think the last meeting happened at sometime around March or April 2003, and after that time, no further discussion or contacts ever happened.

Q. And when is the next time that you ever heard from LaserDynamics?

A. After 2003, I think in August of 2006, we learned that we were involved in this litigation.

Q. How did you learn that?

A. At the beginning, the lawsuit -- in the lawsuit, they sued our subsidiary in the United States, Quanta Storage American, Inc. Then I learned about this lawsuit.

Q. And at the time that this lawsuit was filed in August 2006, who was QSI's major customer?

A. I think, at that time, the major customer was Philips.

Q. Did you alert Philips after this lawsuit was filed?

A. Yes. We did notify Philips of this lawsuit.

Q. Why did you notify Philips?

A. Because based on our agreement, based on our subcontract manufacturing agreement with Philips, Philips had the responsibility to handle such licensing issues.

Q. And what happened with Philips after you alerted Philips?

A. Philips told us that they hoped --

MR. SANKEY: Objection, hearsay.

THE COURT: Sustained.

Q. (By Ms. Murray) Mr. Cheng, can you tell us who currently is QSI's largest customer?

A. Currently, it is Sony.

Q. And does QSI manufacture products for Sony pursuant to an agreement?

A. Correct. We supply the optical disk drives to Sony based on a subcontract manufacturing agreement with them.

Q. Let's take a look at that agreement.

MS. MURRAY: It's Exhibit 392, please.

Q. (By Ms. Murray) Does this Exhibit 392 -- is this a copy of the agreement between QSI and Sony for manufacturing the drives?

A. Yes, this is the one.

[redacted]

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[redacted]

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[redacted]

THE COURT: All right. We'll take a morning break here, Ladies and Gentlemen.

Be ready to come back in the courtroom at 10:30. Remember my instruction about not discussing the case during the break.

(Jury out.)

THE COURT: Court's in recess till 10:30.

MR. PARKER: Your Honor, may we address -- may I address one thing briefly before the recess?

THE COURT: Okay. Have a seat.

MR. PARKER: The --

THE COURT: You may step down, Mr. Cheng.

MR. PARKER: The inquiry that you started to make about what he was told by Philips and the hearsay objection was made and sustained, I do believe, Your Honor, that there is an exception there in that it would come in to explain course of conduct in the sense that they did not change their operations because they were given assurances by Philips.

I'm not trying to re-inject the license thing in the case, but it would go to willfulness, if they were told by -- if he was told by Philips not to worry about it and go forward because Philips has a license.

I understand it's a problematic issue, but it really is important about willfulness.

THE COURT: Well, you don't think you got that through without -- you don't think that -- well, first of all, I sustained an objection. Nobody

suggested to me that they're offering this under a hearsay exception.

And then the question was, well, after you heard. That's just what I ruled out, you know. If we have an exception, then we need to talk about it.

Now then, you're now wanting to offer that testimony as an exception?

MR. PARKER: Yes, sir. And that was the second hearsay objection. I'm not trying to say anything about the first one that we had the bench conference about, but the one where you said -- when you talked to Philips, what did -- you told Philips about the lawsuit. What did Philips say?

Mr. Sankey objected. You sustained the objection. And perhaps it would have been appropriate if I had stood at that time to suggest, but I didn't know if we wanted to argue that in front of the jury.

THE COURT: Why wouldn't that be an exception, Mr. Sankey?

MR. SANKEY: Your Honor, if the witness's answer is going to be that Philips told him not to worry about it, I don't have an objection to that response.

And I think it would be an exception, what they were told.

THE COURT: Okay. Why don't we get that

out since he's going to be back on the stand.

MR. PARKER: Thank you, Your Honor.

COURT SECURITY OFFICER: All rise.

(Recess.)

COURT SECURITY OFFICER: All rise.

(Jury in.)

THE COURT: Please be seated.

Let's continue.

Q. (By Ms. Murray) Mr. Cheng, before the break, we were taking a look at QSI's manufacturing agreement with Sony.

MS. MURRAY: If we can put that back up, please. Thank you.

A. Okay.

[redacted]

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[redacted]

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[redacted]

Before Sony, did QSI have a manufacturing agreement with another company?

A. Yes. Before Sony, we subcontract manufacture for Philips. We manufactured optical disk drives for them.

MS. MURRAY: Let's take a look at Exhibit 265, please.

Q. (By Ms. Murray) Mr. Cheng, have you seen this document before?

A. Yes, I have.

Q. And what is this document?

A. Basically, it is the same as Sony. This is a subcontract manufacturer contract.

[redacted]

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Q. Okay. Let's take a look at the second page of this agreement.

A. Okay.

Q. Mr. Cheng, do you recall discussing this agreement with Mr. Sankey a couple of days ago?

A. Yes.

Q. And on the second page of this agreement, there's a chart in the middle.

Do you see that?

A. Yes, I see that.

Q. And do you recall what -- you were explaining with Mr. Sankey what this chart represents?

[redacted]

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[redacted]

Q. Let's take a look at another agreement that Mr. Sankey showed you on Tuesday.

MS. MURRAY: If you can bring up 249, please.

A. Yes, I see that.

Q. (By Ms. Murray) What is this agreement?

[redacted]

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[redacted]

REDACTED BY ORDER OF THE COURT

[redacted]

Q. Mr. Cheng, I would like to take you back a little bit, going back to our discussion a little earlier, after the lawsuit was filed and you contacted Philips about the lawsuit.

What did Philips say to you?

A. In their response, the -- their main opinion was we did not have to worry about this case; they hope that QSI would continue to supply optical disk drives and continue manufacturing for Philips.

Q. Mr. Cheng, after QSI was sued in this case, did it believe that the '981 patent was valid?

THE INTERPRETER: Interpreter needs to clarify with the witness.

A. We did not -- we did not believe so, because we believe that the validity of the patent is in doubt. And my knowledge is the U.S. Patent & Trademarks Office has also had a substantial question of the validity of the patent.

Q. Thank you, Mr. Cheng.

MS. MURRAY: Pass the witness.

THE WITNESS: Thank you.

CROSS-EXAMINATION

BY MR. SANKEY:

Q. Mr. Cheng, from 2002 through today, has your company obtained any type of an opinion from an attorney on the issue of validity?

A. We do not have such an official document.

Q. Do you understand that in 1996, the U.S. -- the United States government said that this is a valid patent?

A. Yes, I know.

Q. Do you understand that after your company asked the Patent Office in 2008 to take another look at this patent, they sent a letter saying they're going to confirm its validity?

A. That is not a correct statement. The reexamination was not initiated by QSI. We just learned of such a matter.

Q. Who was it initiated by?

A. I don't have the knowledge. I don't know who.

Q. The second half of my statement you agree with, that the United States government said they're going to reaffirm the validity of it?

A. As for how the U.S. government will further examine the issue, I do not have the knowledge. I only know that the U.S. government has raised a substantial question regarding the validity -- validity of the patent.

Q. So is your answer you don't know that they did that last year?

A. According to my current knowledge, I don't have any relevant information.

Q. Is your company's allegation on validity just an effort to get out of the trap?

A. Of course, after the lawsuit was filed, the position of our company was to --

THE INTERPRETER: Interpreter needs to clarify with the witness.

A. After the lawsuit was filed, our position was that the validity of the patent was questionable. And this is one of our defense, and our attorney would have such an opinion.

As -- as for getting out of the trap in your question, I do not know what you really mean. But we just want to resolve the issue through the validity.

THE INTERPRETER: That was not a correct translation.

A. What I meant to say was, we want to have a

solution regarding the validity, regarding the whole case.

THE INTERPRETER: Okay. Interpreter needs to clarify with the witness.

A. We want to have an effective resolution of this case. I did not say the validity solution.

Q. (By Mr. Sankey) And that's why we have the jury here this week, to give us a final resolution of this dispute, correct?

A. Yes.

[redacted]

REDACTED BY ORDER OF THE COURT

[redacted]

A. Yes, I see that.

Q. The Sony agreement that you talked about, you

negotiated that about three months after this lawsuit was filed, correct?

THE INTERPRETER: Interpreter was asked to repeat the rendition.

A. I think we started the negotiation with Sony in 2006, and the signing of the agreement has nothing to do with this lawsuit.

Q. (By Mr. Sankey) You signed the agreement in November of 2006.

A. If I remember correctly, that's right.

Q. Neither you nor Sony mentioned Mr. Kamatani, LaserDynamics, or the '981 patent in this contract, did you?

A. That's correct. This is simply a subcontract manufacturing agreement. It would not have any relationship with this case.

Q. You mentioned that when there were meetings with QSI and LaserDynamics in 2002/2003, that there was an offer for a license, a money offer, correct?

A. Basically, in 2003, their attorney proposed to QSI that they would consider a lump sum payment and propose this licensing agreement with us.

Q. Do you have a single document to show this jury to verify that that ever occurred?

A. No, because the discussions were oral

discussions. We did not have any documents to document that.

Q. Because -- I guess Philips and Sony have been your two main clients since about 2004, correct?

A. Correct. Since the year 2004; that's correct.

Q. And your testimony is that we do what our customers ask us or tell us to do, or we try to?

A. Correct. That is stipulated in the agreement, and we have to abide by the agreement.

Q. And those customers have told you to keep on making and keep on selling optical disk drives?

A. Correct, because that's the right they have to make such request to QSI --

Q. And that's why --

A. -- according to the agreement. I'm sorry.

Q. And that's why your company has sought indemnification from Philips and Sony to reimburse you for any damages incurred in this case, correct?

A. I think basically we asked Philips and Sony to stand out and resolve the litigation and so-called license dispute. I think we did not mention any specific amount or compensation to them.

MR. SANKEY: Nothing further.

THE COURT: Ms. Murray?

MS. MURRAY: Nothing further.

THE COURT: You may step down.

Who's your next witness?

MR. PARKER: May we approach, Your Honor?

THE COURT: Sure.

(Bench conference.)

MR. PARKER: I would propose to read about one minute of deposition testimony at this point in that I understand we had an agreement on.

Now, the agreement was -- it's actually testimony Mr. Trop gave as a corporate representative of LaserDynamics. We've agreed not to mention Mr. Trop's name, but -- and we agreed not to use it and read it in, if Mr. Kamatani, when I asked him, did you have a policy of proposing lump sum agreements for small, medium, and large companies, and when I put that question to him on the witness stand -- and I had understood he was going to be coached to agree with that or to essentially give the same testimony that Mr. Trop gave.

He basically said we didn't have any policy. So I think, under the terms of our understanding, I now have the right to read this without using Mr. Trop's name but just identifying the person testifying as someone under oath as a representative of LaserDynamics.

MR. SANKEY: One, this is a deposition of

Mr. Trop as a 30(b)(6) witness in the BenQ case prior to this one.

He was asked, what are the policies for big, small, medium for 200,000 or less. The question was asked of Mr. Kamatani. He never denied that he didn't have a policy for big companies for 200,000 or less. He wasn't asked the same question. They want to use this to try to impeach --

THE COURT: Y'all have got a daily transcript. Y'all want to show me the question?

MR. PARKER: We can and I'm not trying to use it for impeachment, Your Honor. I just want to put into evidence that they, in fact, had a policy. And in this, they take the position that they, in fact, had a policy.

THE COURT: Okay. You're using a deposition from a prior proceeding. What exception does it have? Are you saying it's not an inconsistent statement?

MR. PARKER: I don't have any exception, Your Honor, except that we had an agreement that we could use it. And I think they --

MR. SANKEY: For purposes if Mr. Kamatani said the opposite.

MR. PARKER: If Mr. Kamatani didn't

testify from the stand that they had that policy, then we were able to read this in, not for purposes of impeaching Mr. Kamatani, but to establish they had the policy.

I thought he was going to say they had a policy, but he fenced with me about that.

THE COURT: Well, I don't think -- I'm sorry. I don't remember what -- you know, you're trying to get me to enforce an agreement that hasn't been reduced to writing. He's saying one thing and you're saying another.

He's saying it was solely for impeachment; you're saying something different.

MR. PARKER: I'm saying -- I'm saying it was to establish the existence of this policy, which I thought their witness was going to agree to.

THE COURT: Well, do you think -- you're telling me -- you don't agree with me that you don't -- you're telling me two different things.

MR. PARKER: That we're taking two different positions?

I think we're taking two different positions now, but the position that Mr. Sankey is taking now is inconsistent with what I understood our agreement to be.

THE COURT: You want me -- I'm not going to recess this trial.

MR. PARKER: I'm not asking you, sir.

THE COURT: Y'all need to find out what the agreement is, okay? So then I'm trying to see, is there a legal position under which this can come in.

I don't have an agreement that I can enforce.

MR. PARKER: Yes, sir, I understand.

THE COURT: I'm not going to recess the trial for purpose of conducting an evidentiary hearing and trying to decide if there was an agreement.

So now then, have you got an exception or not?

MR. PARKER: Well, we have sworn testimony. It's not in this proceeding, but it's in another proceeding of a person who identified themself as a representative of LaserDynamics and when they stated, under oath, unequivocally that there was a policy --

THE COURT: Not identifying Trop as the witness, but identifying this as a deposition taken of a 30(b)(6) witness.

MR. SANKEY: And is the part in there about the timeframe that he's talking about, the '98/'99

timeframe? That's not in the question I saw.

MR. PARKER: If that is the timeframe, I'll be happy to say that. If there's a question that establishes that, I'll be happy to read it.

MR. SANKEY: You would say the question was asked of the corporate -- corporate's policy?

MR. PARKER: At the time they entered into these various license agreements, yes.

THE COURT: Okay.

(Bench conference concluded.)

MR. PARKER: May it please the Court.

Your Honor, at this time, we're going to read into evidence a small amount of deposition testimony, so it's not going to be like what they had to listen to the other day.

And to put it into context, this is deposition testimony that was offered by someone who was designated as a corporate representative of LaserDynamics.

It was given under oath in another case, but the person was sworn in and was representing LaserDynamics, and they were being questioned about the policy of LaserDynamics during the time period when we saw that various agreements were entered into, the 16 agreements that you saw on the board, which I believe

were dated in 1998 through 2000.

And I will now read it.

QUESTION: Did LaserDynamics or Mr. Kamatani do any sort of analysis with respect to companies that they were offering to license the '981 patent in determining what LaserDynamics was willing to accept in return for licensing that patent to these companies?

ANSWER: Yes.

QUESTION: What analysis did LaserDynamics or Mr. Kamatani do?

ANSWER: It was some type of subjective effort to organize -- to categorize them as big, medium, or small.

QUESTION: And which companies were considered to be in the category of big, or what category was used to determine whether a company was big, medium, or small?

ANSWER: Mostly some type of subjective determination of how large they were and how much they might be interested in DVDs in the future.

And how did the --

QUESTION: And how did the categorization of companies as big, medium, or small affect the amount that LaserDynamics was willing to license the '981

patent for to these companies?

ANSWER: At least early on, the companies in the big category were offered $200,000, and everybody else was offered something less.

That ends the testimony.

THE COURT: Who will be your next witness?

MR. PLATT: Defendants would call Professor Duncan MacFarlane.

COURTROOM DEPUTY: Raise your right hand, please.

(Witness sworn.)

DUNCAN MACFARLANE, Ph.D., DEFENDANTS' WITNESS, SWORN

DIRECT EXAMINATION

BY MR. PLATT:

Q. Professor MacFarlane, could you introduce yourself to the jury.

A. Yes. My name is Duncan MacFarlane. I'm a professor of electrical engineering at the University of Texas at Dallas.

Q. And did you prepare some slides today?

A. Yes, I -- I have, and some of them are up now.

Q. Okay. Can you first describe your educational background.

A. Absolutely. I received a Master's and a

Bachelor's in electrical engineering from Brown University in Providence, Rhode Island. Those were in the mid-'80s.

Following that, I worked for a year at a high-tech company outside of Boston, and I went back to graduate school this time in Portland, Oregon, and I graduated from Portland State University with a Ph.D. in electrical engineering in 1989.

Q. Now, did you specialize in any aspect of electrical engineering in your studies?

A. Yes. From my Bachelor's and certainly from my Master's, I emphasized lasers and modern objects.

MR. PLATT: If you could move to the next slide.

Q. (By Mr. Platt) What is your current position right now?

A. I'm a professor of electrical engineering at the University of Texas in Dallas.

Q. And I notice that you've gone from associate professor up to professor. Is there a difference there?

A. Well, yes. Actually, in 1989, right after I graduated with my Ph.D., I moved down to Dallas. The university was just getting started.

And I joined the faculty as an assistant professor, which is an untenured professorship. You

have about five years to prove yourself to -- in teaching and in research to be promoted to associate professor with tenure.

I -- I achieved that in -- in 1994, and then I served as an associate professor for a number of years, again, working hard in my laboratory. I did take a couple of years off in there to -- to work at JDS Uniphase and Celion Networks, a little bit of Texas Instruments as well.

But along about 2001, I was promoted to full professor of electrical engineering.

Q. Can you tell us about some of your job responsibilities as a professor?

A. Sure. You know, professors, especially full professors, have three components to their job.

Teaching is by far one of the most important ones, and that's fundamentally classroom teaching at the graduate and undergraduate level. That's really our biggest and most important product, as a -- human resources, that your public universities turn out. In addition, at a research university like UT Dallas, advancing the art of your -- of your expertise, advancing the knowledge base in your area is also very important.

And so the second -- the second part of the

job is -- is to perform original research, and you team with postdocs and graduate students and undergraduate students to really advance the field of knowledge.

Finally, the third -- the third -- the third piece of this, and this is not to be underestimated, it's service. And that's service to both the community and -- and the university.

Most recently, my activities in service to the university have been to help start new degree programs and new -- and new -- and new departments within the Jonsson School of Engineering and Computer Science.

Q. Now, you mentioned research. Is there a specific area of your research?

A. Yes. I've always focused on -- on lasers and optics. Sometimes we call it photonics these days.

Q. Now, is there a relationship between photonics and the optical disk technology?

A. Yes. I would characterize an optical disk drive as an example of an optical system, example of a photonic system. It has the lasers. It has the precise optics. It has the photodetectors.

Even -- even the disks in play are -- are -- are carefully designed optical entities.

MR. PLATT: If we could go back to the first slide.

Q. (By Mr. Platt) How many publications have you offered?

A. I have over 60 peer-reviewed journal publications.

Q. When you say peer-reviewed, what does that mean?

A. Well, there's a -- there's a checks and balances in the -- in the scientific literature, and really, the way I look at it is, if you perform original research, and certainly, if you're funded by the government to do so, you have an obligation to -- to carefully and precisely get that information out to the public. And you do that through these peer-reviewed journals.

And so you take your results; you write them up into manuscripts; you submit them to the appropriate journals, the subject matter journal that you think it most matches.

It goes to an editor, but then it goes out to other colleagues. And typically, these are active researchers or experts in industry or academia, and they review that manuscript.

And it's a blind review. And they will -- they will put a very high bar on whether or not these -- these publications become part of the scientific

literature.

Q. Now, do you have any responsibility -- any editorial responsibilities for journals?

A. Yes. Last year, I was named associate editor for Applied Optics, which is a -- which is a peer-reviewed journal in the area of applied -- in the area of modern optics, applied opticals.

Q. Are you a named inventor on any patents?

A. Yes. I have over ten -- I'm the named inventor in over ten patents, probably a dozen by now.

Q. Have you been asked to review and consider the '981 patent in this case?

A. Yeah. Yes, I have.

Q. Have you formulated an opinion with regards to the issue of infringement --

A. Yes. I do not --

Q. -- of Claim -- I'm sorry.

A. I'm sorry. Go on.

Q. -- of Claim 3 of the '981 patent?

A. Yes. I reviewed Claim 3 of the '981 patent, and my opinion is that the S-curve techniques that we've been talking about over the last few days do not infringe -- are not infringed by the patent.

Q. Do you have any other opinions with respect to infringement?

A. (No response.)

Q. Okay.

A. Yes, I do. The particular products in -- at question in this case do not -- are not infringed by the patent as well.

Q. Why do you disagree with Dr. Howe's opinion that the Quanta -- with the Quanta products that he says he analyzed?

A. So I reviewed Dr. Howe's opinion and listened to his testimony, and I disagree with him on two counts.

One is that I don't believe the S-curve characteristics, techniques -- the S-curve techniques are covered by the '981 patent.

And I also -- I also object to some of the methodology that was used by Dr. Howe, particularly the interpretation of source code from non-QIS (sic) products and the extrapolation of those -- of that analysis to the accused products.

Q. Now, you mentioned S-curve. Why do you disagree with Dr. Howe on the S-curve?

A. So fundamentally -- and I think we learned a little bit about S-curves the other day, and we're going to talk a little bit about that in a little bit, but, fundamentality, the S-curves measure the locations of the interface of the optical disk, particularly the data

layers, and they -- and they -- and they measure where those -- where those interfaces are, where the data layers are and -- and how many there are.

That's not covered by the claim -- by Claim 3 in the patent.

Q. Now, you mentioned something about Dr. Howe's methodology. Why do you disagree with his methodology?

A. Well, Dr. Howe -- Dr. Howe reviewed source code for products that were not part of -- not part of the QSI product line. He looked at the source code, and he formulated an opinion on those products.

And then he did a -- I think his phrase was a limited review of the -- of two QSI products, just a couple of -- two or three or four, just a handful of QSI products, and tried to extrapolate that -- those results on to those products, recognizing, of course, the fact that there are 20 products that -- that are accused.

Q. Could you explain to the jury how an optical disk drive works?

A. Yes, I can. And if you'll allow me, I have a short -- a cartoon movie that we can -- that we can watch.

(Video playing.)

A. So we're going to go through the basics of the construction of a typical CD.

We'll start with the substrate. That's the plastic polycarbonate layer, and we'll put a -- there's an aluminum data layer that's put down onto that, a lacquer data layer follows mainly to protect that, and then the label comes on. And that's what you've been seeing in your hands and probably using.

Now we're flipping it over and talking about what's on the other surface. And this is the -- these are the pits and the lands that store the data on the -- on the drive. The pits are these depressions in the surface, and the lands are high reflectivity areas that are not.

This is the same, viewing a cross-section. The lacquer layer, the label, the data layer, the plastic layer.

And now what we'll do is, we'll bring in the optical head on its sled. It comes in. There's the laser on the bottom, the collimating lens, the view splitter, the focusing onto the -- to the surface.

This assumes that all the tracking is done right, and you're reading zeros -- you're reading the pits and the lands to get you the ones and the zeros.

You're seeing the light reflected off of the land. That is captured by the collimating -- by the collection optics and routed to the detector.

There's also light that hits the -- the pits. The pits are designed not to reflect the light. There is probably a little bit of light that does get back into the collection optics from those and fall onto the -- onto the detector.

In the movie that we saw, everything was tracking, and so the output of the detector layer -- the output of the photodetector would be translated into the music and the videos that we enjoy on -- that are stored on these -- on these CDs and DVDs.

Q. (By Mr. Platt) Okay. What are the main differences between a CD and a DVD?

A. Well, I -- simply put, the DVD is an advanced version of the -- of a CD. The -- the pits and the features on the DVD are -- are much higher density, and so you can store much more information on it.

In addition, on some of the -- on some of the DVDs, you have multiple layers; you have dual layers. And that -- again, you can store more information on them.

Q. Okay. And you reviewed the '981 patent; is that correct?

A. Yes, I have.

MR. PLATT: If you could pull that up.

Q. (By Mr. Platt) And would you like a laser

pointer as we go through this?

A. Yes, I would love one.

MR. PLATT: Your Honor, if I may real quick?

THE COURT: Yes.

A. I'm always forgetting these. I apologize. Thank you.

Q. (By Mr. Plat) Okay. Why don't we turn to Figure 1 of the --

A. Sure.

Q. -- '981 patent.

A. So we were just looking at the cover page of the '981 patent that you've looked at in this case already. The figures are -- there are two figures that I'll briefly go through with you on this figure are important in patents.

But this is the -- this is the -- a block diagram of the guts of an optical disk drive. You have the motor that spins the disk. You've got the -- the optical head. Schematically, you're showing the -- the focusing of the -- of the -- of the byte.

Here's the track servos that we -- that's talked about -- we've been talking about as well. And the rest of the electronics to support that operation and to take that data, to take the data and play it,

either music or -- or videos or what-have-you.

MR. PLATT: Why don't we turn to Figure 2.

A. Remember that the '981 patent is a -- is a method patent, and methods are often illustrated with flow charts. And again, that's consistent with some of the things we've talked about already.

The -- this is the -- this is the main -- this is the main figure of a flow chart in the -- in the '981 patent. It's the second of two figures, and it's the flow chart for the -- for the method.

Q. (By Mr. Platt) Could you start at the top and walk us through this?

A. Absolutely.

This -- the -- the -- I'll -- I'll -- I'll talk -- look at the start and look at the end.

The start is when you put an unknown disk into the -- into the disk drive.

The end is when everything is happening, and you're playing the data from the disk.

And what those -- what goes between there is a -- is a -- is trying to understand what that disc is. And -- and the first -- the first step of that is to ask the question, is there -- is there -- do you have access to the TOC data. That's the table of contents data.

And if that table of contents data is there, then the method teaches you to try to read that data, to collate the TOC data with the stored data in memory.

If the type of -- if that identifies the type of disk, then you settle the servomotors, and you go ahead and you play your -- your -- your data or your video or your CD.

If you don't or if there is no TOC data, then you find yourself in this -- in this loop here, and it starts by asking -- asking the -- the -- the disk drive to read any data on the disk and then to do some data processing on that disk and then -- and then to do another collation -- a collating step here.

Incidentally, it's interesting that this -- the phrase in here is exactly the same as the phrasing on that block as well.

And then -- and if that -- if that works, reading the data -- any data on the disk and identifying it. Then, again, you can -- you understand what disk you have. You can settle the servo modulation, and you can play the -- play the data.

But if you don't, then you have to try again. You have to try again to read any data on the disk, and you have to walk yourself through that -- that same block again.

Now, what's interesting about -- about this chart and also this -- the -- the verbiage is, if -- there's no real -- there's no guidance on telling you what to do differently through the next step.

And -- and even if it was, you can imagine that there would be -- that there's a situation where you'll just loop back and forth and back and forth in what you -- in what's sometimes called an infinite loop in this -- in this -- in this -- in this block diagram.

MR. PLATT: Okay. Why don't we turn to the next slide?

A. The next slide is the -- is the -- is the text of the patent, and it's -- it's illustrated in Column 1, Column 2, Column 3, and just about to there in Column 4. And -- and it includes a background of the invention that's typically the -- the motivation, includes a summary of -- of -- of the invention. There's a list of drawings. I mentioned the drawings are -- are -- are important communication tools in engineering.

And then -- and then also a detailed description of the preferred embodiment, which starts about there and ends about there. And then at the end here are three numbered sentences, and these are -- these are the claims of the patent.

Q. (By Mr. Platt) And which claim is at issue?

A. My -- Claim No. 3, which is the last one sitting right over there.

MR. PLATT: Now, if you could turn to -- go ahead and go to the next slide.

Q. (By Mr. Platt) Could you just go through briefly this claim?

A. Yes, absolutely. This is a method claim. You can -- you can see that from the preamble, an optical disk reading method.

And there are -- there are -- there are three steps of this claim. There's a step that begins with the word processing, a step that begins with the word collating, and a step that begins with the word settling.

So these three steps are -- comprise -- comprise the method. And then at the end, there's a -- there's a -- another -- a claim element which talks about the servomechanism.

Q. Now, why don't we go ahead and focus in on the first claim element.

A. So -- so I'll take this one by one.

The preamble is an optical disk reading method comprising the steps of. And this -- this first claim element is -- reads: Processing an optical signal reflected from encoded pits on an optical disk until

total number of data layers and pit configuration standard of the optical disk is identified.

And there's a -- and there's some important words in there that have been considered by the Court and have been construed.

Processing an optical signal, for example, means converting or manipulating an optical signal from one format into another.

The phrase encoded pits means depressions in the surface of the disk, which represents data or information.

Q. Okay.

MR. PLATT: Why don't we go ahead and go to the next slide.

A. Okay. We'll now go to the next step, the collating step.

The claim reads -- the claim element reads: Collating the processed optical signal with an optical disk standard data, which is stored in a memory.

And then -- and then that -- and then that phrase has also been construed. Collating the processed optical signal with an optical disk standard data stored on a memory means -- memory means comparing the processed optical signal with an optical disk standard data stored on a memory.

MR. PLATT: Could you go to the next slide?

A. And the last step of this -- of this -- of this method is the settling step.

And the claim element reads: Settling modulation of servomechanism means dependent upon the optical disk standard data, which corresponds with the processed optical signal.

And, again, there's a -- there's some important phrasing here that's been construed. Optical disk, this -- this -- this whole phrase has been -- has been construed to be establishing the regulation of an automatic feedback control system for mechanical motion dependent upon the recognized arrangement of depressions of an optical -- for an optical storage medium which corresponds to the processed optical signal.

So in particular, we learn here what the optical disk standard data is in --

MR. TROP: Your Honor, could we approach?

THE COURT: Yes.

(Bench conference.)

MR. TROP: What's being done now is to partially write the Court's claim construction. The Court gave a claim construction as a whole, and now they're trying to parse pieces out of it and construe

other terms, and that is, they're trying to parse that piece out and construe that as a constructural opt -- data storage.

And the Court never gave any such instruction. It construed it as a whole. It didn't construe it in pieces.

THE COURT: Well, what do you say to that, Counsel?

MR. PLATT: Your Honor, he's talking about the whole construction. He highlighted part of it to just distinguish those pieces.

THE COURT: Now, what are you say -- what are you referring to particularly?

MR. TROP: The construction -- the Court's claim construction, what they're doing is highlighting four words in the claim and trying to match them up with what they believe you meant within your claim construction.

But you didn't do that. You construed it as a unitary entity, and now they're trying to reparse it out.

THE COURT: Sustained. Get that off of there, Counsel.

MR. PLATT: Okay.

THE COURT: That is a direct violation --

now, wait just a minute.

MR. PLATT: Yes, sir.

THE COURT: Don't you walk off from me when I'm talking to you.

MR. PLATT: I'm sorry.

THE COURT: You get it off of there, and you comply with the Court's order. The Court's claim construction order said do not do exactly what you're doing.

MR. PLATT: I'll take it off.

THE COURT: And when I'm telling you to do something, you don't start turning around and walking off.

MR. PLATT: Yes, sir.

THE COURT: It's going to be a real bad day for your client if you don't get yourself together.

MR. PLATT: Yes, sir.

(Bench conference concluded.)

MR. PLATT: May I have a moment, Your Honor?

THE COURT: Pardon me?

MR. PLATT: May I have a moment?

THE COURT: Sure.

(Pause in proceedings.)

Q. (By Mr. Platt) For the three QSI drives that

Dr. Howe looked at, what's your understanding of Dr. Howe's basis for why those three drives infringe?

A. My understanding is that Dr. Howe asserts that this -- these operate -- that these operate using S-curve techniques -- techniques.

Q. Can you explain to the jury what the S-curve technique is?

A. Yes, I can. And I think we have some -- some more animation to show.

(Video playing.)

A. This is -- this is a blank CD-ROM, and it shows the S-curve method. Again, just reorienting ourselves of what the -- what the parts of that CD-ROM is, the data layer is there, the plastic layer, the light is there -- in there.

It's far enough away from the interface that there -- any reflection off the surface would not be very much. It would not be captured by the -- by the lens. But as you get close, more signal comes into the -- into the photodetector.

The process goes above a threshold and then comes back down, and then that's -- that's a -- that's the characteristic S-curve that comes from the interface between the air. That's -- that's often used as a reference.

The -- the focus -- the focus continues to move, and when the focus spot gets to the data layer, again, you see that sweeping of the -- of the -- of the high, the zero, and the low again in -- in the characteristic S-curve.

It's important to note that this chart shows -- shows two things. It shows a small S-curve from the surface and a large S-curve from the data layer and a period of time between -- between those two.

Q. (By Mr. Platt) Have you also prepared an animation for a DVD?

A. Yes. Let's get slightly more complicated and look at a dual-layer DVD. And remember, on a DVD, the data -- the data layer will be -- will be less -- will be about half the distance to the air interface, and in this case, there will be two of those data layers. So here we have the label, lacquer, the -- and the two data layers, spacer in between, polycarbonate spacer in between, plastic layer, and again, the air interface. The focus is there. Start moving the lens.

As you get close, the collection optic starts to accept a non -- a non-trivial amount of light, nulled out at the center and nulled out right at the interface. Negative gives you your -- your reference S-curve.

Very quickly, you hit your first data surface.

You get a strong S-curve from that. Going to zero as you cross, as you hit the second S-curve, you, again, get a -- as you see it, but that second data layer, you get a second S-curve, and again, that's traced out on the -- on the -- in the voltage signal off of the photodetector.

And, again, on this one, you have a -- three S-curves; one small one for the reference and two larger ones for the data layers. And there's a -- there's periods of time between those S-curves that correspond to the physical differences of the DVD.

Q. Do you have a slide comparing the difference between a CD and a DVD?

A. Yeah. I think the next slide, and it's just a still slide showing the two examples.

Again, we have the CD-ROM with the -- with the reference -- the small reference S-curve and a certain time of flight to the -- to the S-curve off the data layer. And then on the DVD, you've got a small S-curve at the reference level, and then you've got the two larger ones at the two data layers.

And so you learn two things from this: You learn that the DVD has two -- two data layers, and the CD has one, and you learn the relative depths or the relative positions of those -- of those data layers in

the CD-ROM versus the DVD.

Those were taken using physical measurements of the properties, the interface properties of the -- of the device -- of the -- of the disk by scanning the lens.

Q. Could you briefly describe the methodology you used to respond to Dr. Howe's analysis?

A. Yes. I read through the patent and certainly the claim construction.

I also read the expert report.

I also reviewed the materials -- some of the materials that Dr. Howe relied on, in particular, the source code.

I reviewed relevant prior art and -- among other things and formulated a -- a review of -- of Dr. Howe's report.

Q. How many QSI products have you looked at in preparing your opinion?

A. I've examined the source code of three QSI products.

Q. Why did you review only those three?

A. Those are the only three that Dr. Howe did.

Q. Are you able to explain to us exactly how those three products work?

A. No, I'm not.

Q. And why not?

A. Well, I didn't do a complete investigation of it. I didn't do a complete source code analysis. I didn't -- I didn't do a flow chart for those particular three products.

Q. And why didn't you do that?

A. Dr. Howe didn't do it, and if he didn't, I didn't think I should do his work for him.

Q. Now, do you agree with Dr. Howe's analysis and conclusion -- conclusions regarding infringement by the S-curve method?

A. No. I disagree with Dr. Howe's opinion on the -- on -- on the -- on -- I'm -- I'm sorry.

Could you repeat the question, please?

Q. Sure. What's your opinion regarding Dr. Howe's analysis of the S-curve method?

A. I disagree with Dr. Howe's analysis on -- on two -- on two points.

One is, I don't believe that the S-curve analysis is -- I don't believe that the S-curve technique is -- infringes the -- Claim 3 of the patent, and also, as I pointed out earlier, I disagree with the methodology that Dr. Howe did in terms -- and specifically, extrapolating the source code from other -- other products to -- to the QSI product.

And I certainly don't agree with extrapolating from there to the other -- other products that just received -- I think the term was cursory investigation.

Q. Now, without referring to any slides, can you tell us generally what elements of the claim are missing in the S-curve method?

A. Yes, I can. The claim -- the Claim 3 of the patent was a method -- I'm sorry.

The Claim 3 of the patent had three steps in the method. There was a -- there was a collating step -- I'm sorry.

There was a processing step, a collating step, and a settling step.

Q. And what's your opinion with respect to those steps?

A. None of those three are -- are -- are -- none of those three read on -- on an S-curve technique.

Q. And why is that?

A. All of those -- all of those three claim elements require -- and, again, I want to make sure I use the right term. But all of those -- all of those terms require the -- the -- the patent talks about encoded pits, and the claim constructions talk about a depression in the surface of the disk, which represents data or information and the recognized arrangement of

depressions.

And -- and so -- and -- and as we've -- as we've looked at these animations, the S-curve doesn't rely on -- on depressions or pits or any features on the surface. It just requires that there be a surface.

In fact, the whole point of the S-curve is to -- is to locate those surfaces and to -- to find out where they are, the depth of them, and how many there are. That's the -- that's the essence of the -- of the S-curve. It doesn't require depressions or pits or lands or anything like that.

Q. Did you hear Dr. Howe's testimony regarding the Asus drives yesterday?

A. Yes, I did.

Q. Do you agree with his analysis relating to the Asus drives with respect to the QSI drives?

A. Well, so Dr. Howe provided some very extensive flow charts for the Asus products, and those on the face looked like he did a reasonable analysis of the Asus products, but then he -- then he said, well, gee, all the -- all the -- all the MediaTek chips that are in the queue are going to work the same whether they're coming out of QSI products or Asus products. And I have a real hard time with that.

Q. And why do you have a hard time with that?

A. Well, you know, even if you have the same chipset, the -- the point -- what -- the point of this firmware, the point of this source code, is that you can very easily adapt it. You can very easily optimize the -- the -- the product.

If you're -- if you're assembling a disk drive at QSI, you may have different -- different mechanical parts. You may have different motors. You may have different lasers. You may have different other chips on -- on -- on -- onboard.

And if you do that, then you've absolutely got to go back into the source code and -- and -- and make sure that everything works.

I was a product manager for a while, and one of the best things -- one of the nicest things we were able to do was -- was -- was customize a product for a particular customer by changing the source code.

Q. In your opinion, how would one determine whether the method steps of the '981 patent are carried out in a device?

A. Well, I think you would do a full flow chart analysis of the source code, and that would -- that would be a great -- a great first step on that.

Q. Now, you've seen Dr. Howe's analysis. If one of your graduate students turned in to you what Dr. Howe

turned in, what would you say to them?

A. Well, I think I would very -- very firmly and, hopefully, politely tell -- tell that person to go back and do it right.

Q. Now --

MR. TROP: Let's put up the graphic of the 20 drives.

Q. (By Mr. Platt) Now, do you know which of these 20 drives are the three that Dr. Howe analyzed?

A. I believe I do. The -- the numbers are kind of -- a little bit confusing, but I believe that these three here, the SBW243, the SDW085, and the SDW087 were the ones that were addressed in -- in Dr. Howe's report.

Q. Now, why don't we talk about the drives that have Philips chipsets. Are you able to identify those on this chart?

A. I believe so, mostly because of the organization of the chart. I believe these along the bottom here are the Philips -- are the Philips drives, the drives that -- I'm sorry -- the drives that have the

[redacted]

REDACTED BY ORDER OF THE COURT

Q. What's your opinion with respect to Dr. Howe's analysis of those Philips drives --

A. Okay. So if I --

Q. -- or chipset drives?

A. For the Philips chipset drives, what I remember on that is that he relied on an analysis that he did four years ago from another -- from yet another company -- I believe it was BenQ -- and extrapolated from that to -- to these QSI products.

Q. And why do you disagree with that analogy?

A. Well, again, for the same ---for the same reasons with -- as lumping all the MediaTek chipsets together. They are -- they're different products. The beauty of the source code is that you can change it and optimize -- you have to be very careful to make sure that all the -- that what's -- well, all the variables are actually called that are in there and so on.

It's not a trivial matter, just to -- just to glance at a variable name and think that that's the same variable as in another -- another code.

Q. Okay. Why don't we look --

A. Another product. I'm sorry.

Q. Why don't we look at the other products that are left after -- after we look at the three --

A. That would be this block here, I believe (indicates).

Q. And are those the drives that you understand Dr. Howe to have said were similar?

A. Say that again, please. I didn't hear you.

Q. Are those the drives that you understood Dr. Howe to say were similar to other drives he looked at?

A. Yes. He went from the Asus drives to these guys, and then he went from these guys to these drives.

Q. Now, as an editor on a peer-review journal, if someone submitted a paper to you that made a conclusion based on a similar analysis, how would you treat that?

A. I -- I -- I -- I would -- I would not let it be published.

Q. Professor, do you have an opinion about validity of the '981 patent?

A. Yes, I do. I -- I -- I don't believe it's a valid patent.

Q. And why is that?

A. I don't believe that the patent is enabled.

Q. And the Court's going to instruct the jury, of course, on the proper legal basis for enablement, but what's your general understanding that you used in looking at enablement?

A. So -- so I'm going -- I'm going to speak as an inventor, because that's what I -- and an engineer from what -- what I know.

Enablement means that I -- that if you -- if

you handed that patent to someone skilled in the art, that that person would be able to reduce it to practice.

Q. What's your opinion of one of ordinary skill in the art?

A. In this case, it would be a degree in electrical engineering and some advanced experience or -- or -- or graduate study in optics. You can see the heavy elements of source code and electronic hardware, and you can certainly see the precision optics in -- in the disk drives as well.

Q. Now, why do you think the '981 -- I'm sorry. Strike that.

Why do you think Claim 3 of the '981 patent is not enabled?

A. Well, so if you -- on the -- one of the claim elements, the processing claim elements tells us to process an optical signal reflected from encoded pits on an optical drive -- disk drive until total number of data layers and pit configuration standard of the optical disk is identified.

And if you recall that the -- the flow chart of the -- from the patent, and in particular, what happen -- what you have to do if you don't have TOC data, you have that infinite loop.

And so that infinite loop, with no guidance on

how to end it, pretty much makes that -- that claim element hard to -- hard to reduce to practice, hard to realize, hard to enable.

Q. Professor, do you have an opinion on non-infringing alternatives?

A. Yes, I do. I think there's a number of non-infringing alternatives.

Q. Okay. And what are those alternatives?

A. Well, there's a -- there's a couple of wonderful prior art references on S-curves, one that was done by Rosen, who is an engineer at IBM, and he then filed a patent in '91. And then there's also one by a Japanese engineer at Matsushita called Maeda.

Q. Could you discuss the Rosen method?

A. Yes. This is the -- this is the cover sheet of Rosen's patent, and it's entitled, Multiple Data Surface Optical Data Storage System, the inventors, IBM, and when it was filed. It was issued, actually, I believe, in '93, which was ahead of the '981 patent that we're talking about today.

And then -- and then there's this picture that I'd like to go into a little more detail on, if I could. And this is -- this is the optical train, the lensing, the -- the focus scan, and you can see here in schematic multiple layers of this -- of this optical recording

medium.

And corresponding to this are the characteristic S-curves that we've talked about. And if you -- if you look carefully at these numbers, you can match these numbers directly off to the layers teaching you that each layer gives you a distinct S-curve.

Q. What's the next alternative? You said the Maeda reference?

A. Yes. If we -- I think we have a slide on the -- for the cover sheet of the Maeda reference. And this was filed just a little bit later, October 30 of '91.

And the -- this is an optical recording and reproducing apparatus and recording media -- medium having multilayer recording membranes. And this was -- this was done out of Matsushita at -- in Japan by Maeda and his coworkers. And you can see here the disk with the multiple layers -- multiple data layers inside of that.

I think, if you go to the next slide -- if you go to the next slide, you'll see what happens during -- when you move the focus lens through a focus scan. And, again, you see the characteristic S-curves that correspond to each of those three layers. And, again, there's numbering associated with those.

Q. Do you have an opinion regarding any other non-infringing alternatives?

A. Sure. There's a number of design alternatives, all very easy to implement.

One of the -- one of the easiest ones is -- remember, there's two -- two lasers in these drives -- there's a CD laser, and there's a DVD laser. And there's a feedback loop.

And you can -- you can do a trial-and-error technique just by turning one on and then turning the other on and just seeing if the -- if the feedback loops are robust enough to -- to -- to find them. And they should be.

Oh, there's also other -- other non -- non-infringing alternatives. You could just rely on -- on the TOC data as well.

MR. PLATT: Pass the witness.

THE COURT: All right. We'll wait to take cross-examination up. We'll go ahead and have lunch. Be back at 10 after -- 10 after 1:00. Come back at 10 after 1:00, and we'll take up the case then.

Remember my instruction about not discussing the case. Have a nice lunch.

(Jury out.)

THE COURT: You may step down, Doctor.

Be seated.

Anything from the Plaintiff at this time? Anything from the Plaintiff at this time?

MR. SANKEY: No, Your Honor.

THE COURT: Okay. I just didn't want to get up and start walking out, and then y'all bring up something.

Anything from the Defendant?

MR. PARKER: No, sir. No, sir.

MR. GARNETT: Your Honor, if I may approach.

THE COURT: Will you identify yourself?

MR. GARNETT: Yes.

MR. SANKEY: Mr. Garnett.

MR. GARNETT: My name is Terry Garnett, and I'm going to be examining Mr. Reed, and I want to make sure that I comply with the Court's orders of this morning.

And so before we put Mr. Reed on, I want to talk with Your Honor about some of his testimony and some of the new demonstratives. I sent them to the other side.

We can review them after lunch after they've looked at the demonstratives, or we can do that now, but I want to make sure, before I launch into any

testimony with Mr. Reed, that I'm clear on the Court's order this morning.

MR. LUCK: I don't think we have the demonstratives.

MR. GARNETT: No. So if you haven't, I sent them over to you. We revised his earlier demonstratives. So you would need to take a look at those. I mean, we can do that after lunch, if you want to see those.

THE COURT: See you a quarter till 1:00.

COURT SECURITY OFFICER: All rise.

(Recess.)

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CERTIFICATION

I HEREBY CERTIFY that the foregoing is a true and correct transcript from the stenographic notes of the proceedings in the above-entitled matter to the best of my ability.

/s/_____ _____
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JUDITH WERLINGER, CSR Date
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